Goddard Space Flight Center 2009 Sample Student Projects

Required Academic Level

Junior/Senior Undergraduate

Category

Engineering

Subcategory

Electrical/Electronics

Project Title

Electrical Engineering Support of the Global Precipitation Mission project

Project Description

The Global Precipitation Mission (GPM) will use a gimballed Solar Array System (SAS) and High Gain Antenna System (HGAS) which will use a GSFC-designed Gimbal Control Electronics. The intern will assist in the design, analysis, and testing of that Control System.

Mentor's Expectation of Student

There is opportunity for the right student to get involved at multiple levels of this project including hardware and software, modeling/simulations, performance analysis, laboratory fabrication, testing. The ideal candidate would be familiar with at least one programming language and have a basic understanding of the principles of electronics design. Simulink and control theory are a plus.

Discipline of Project and/or Background Needed to successfuly complete the project

Electrical Engnr; Calculus

Skills

Oral/Presentation, Analysis, Problem Solving, Research, Teamwork, Technical Writing, Data Acquisition, Oscilloscopes, Control Systems, Electronics Testing, FPGA, PSPICE, Sensors, Windows, Excel, Powerpoint, LabView, Computer Modeling/Simulation